



\* 1986 COUNT

+ 1987 COUNT

ALL OTHER COUNTS FROM 1988



Existing Average Daily Trips 1988 (ADT in thousands)

Kearny Mesa Community Plan

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FIGURE

# TRANSPORTATION ELEMENT

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## PRIMARY GOALS

- Provide a safe and efficient multimodal transportation system that maximizes access for employees, customers, and residents of the community while minimizing adverse environmental impacts.
- Establish a vision for the future where individual choice is enhanced through the implementation of mass transit concepts.

## EXISTING CONDITIONS

Since the adoption of the 1977 Serra Mesa Community Plan, the community has experienced increased traffic volumes on many of the major and arterial streets (**Figure 9**). Freeways that were anticipated by the 1977 plan have either only recently been opened or are yet to be completed. State Route 52 easterly from I-805 to Santo Road in Tierrasanta was completed in August 1988. The easterly connection of SR-52 to, and the construction of SR-125, is not expected to be completed before the mid-to-late 1990s. The primary cause of congestion in Kearny Mesa, however, is the land use pattern. Development has occurred with an intensity and type of use that generate traffic volumes greatly in excess of the industrial uses originally assumed in the 1977 plan. An associated cause of congestion is building and site design, which emphasizes automobile transportation almost to the exclusion of other modes of travel.

### Street System

A key factor contributing to the development of the community has been its exceptional freeway access. The community is bounded or bisected by four freeways: I-805, SR-163, I-15 and SR-52. These freeways link Kearny Mesa to the rest of San Diego and provide opportunities for regional transit service.

The surface street system in Kearny Mesa is characterized by four functional classifications: Primary arterials are usually six lanes and are intended to carry through traffic and provide a network connection to freeways while limiting access to abutting properties. Existing primary arterials in Kearny Mesa are Clairemont Mesa Boulevard and Balboa Avenue, west of Convoy Street. Major streets are four- to six-lane facilities also intended to carry through traffic and provide a network connection to freeways, but provide access to abutting properties. Existing major streets in Kearny Mesa include Convoy Street and Aero Drive. Collector streets are two- to four-lane facilities intended to collect trips from adjacent properties and funnel them to major streets or primary arterials. Local streets serve adjacent properties and provide linkages to collector streets.



**Existing and Recommended Bikeways**  
Kearny Mesa Community Plan

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FIGURE

Traffic volume varies considerably on the primary arterial and major street network in the community. Aero Drive, Balboa Avenue, Clairemont Mesa Boulevard and Convoy Street experience peak hour congestion along significant portions of their length. This can be attributed to the very high employment level in Kearny Mesa and the high dependence upon auto travel.

### **Parking**

On-street parking congestion is a problem throughout Kearny Mesa due in large part to the lack of off-street parking by automobile-intensive development. This problem has evolved because the traffic generated by retail and office uses exceed that generated by industrial uses, yet these commercial uses are being developed on industrially zoned properties with off-street parking requirements geared to industrial uses.

In the industrial areas between I-805 and SR-163, the on-street parking of trucks is a common occurrence. Trucks often use the street as a loading zone or for long-term storage.

### **High Occupancy Vehicle (HOV) Corridor**

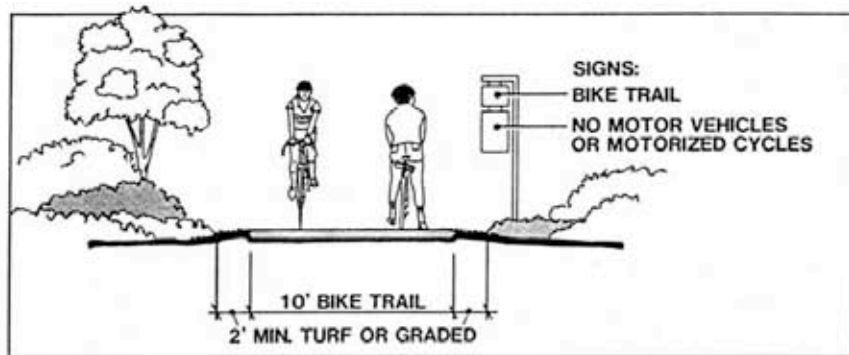
The 1984 Regional Transit Plan prepared by SANDAG calls for express bus service in the I-15 corridor. In October 1988, Caltrans opened two reversible high occupancy vehicle (HOV) lanes in the median of I-15 from the junction of SR-163, just north of the Plan area, to the proposed SR-56 in Rancho Peñasquitos. The opening of the HOV lanes has improved transit service in this rapidly developing corridor. Based on studies completed in 1983, improved bus service using the HOV lanes can serve this corridor at least through the year 2005.

Although the HOV lanes are located on I-15 north of Kearny Mesa, they do help to ease congestion on those portions of I-15 adjacent to Kearny Mesa. Additional HOV lanes on I-15 are currently being considered by Caltrans. The HOV lanes are proposed to be extended north from Rancho Peñasquitos to Escondido and south from the junction of SR-163 to I-8 in Mission Valley. Actual development would be phased over a number of years and would depend on the availability of funds.

### **Light Rail Transit**

The Regional Transit Plan identifies the I-15 corridor as a site for the LRT line to connect Mission Valley to Escondido. As recommended, the I-15 corridor alignment connects with the Mission Valley alignment at San Diego Jack Murphy Stadium and is to extend north along I-15 to serve adjacent communities, including Kearny Mesa. The alignment for the I-15 corridor LRT Line is currently (1992) being studied by the MTDB.

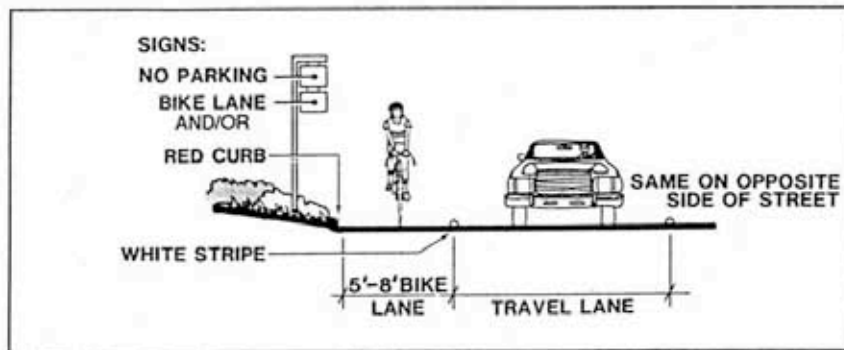
In March of 1992, the MTDB issued the Light Rail Transit Extension Alignment Study that identified four potential LRT alignments to serve the I-15 area. These alignments are as follows:



### CLASS I (Typical location - open space)

#### Bicycle Path

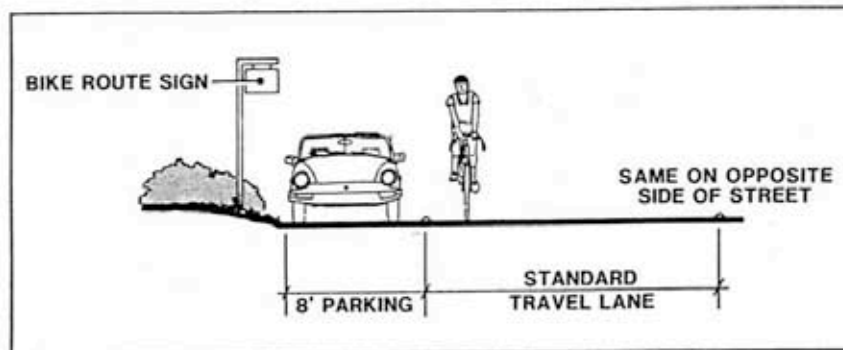
A completely separate right-of-way for the exclusive use of non-motorized vehicles.



### CLASS II (Typical location - major street)

#### Bicycle Lane

A restricted right-of-way located on the paved road surface alongside the traffic lane nearest the curb, and identified by special signs, land striping, and other pavement markings.



### CLASS III (Typical location - neighborhood street)

#### Bicycle Route

A shared right-of-way designated by signs only, with bicycle traffic sharing the roadway with motorized vehicles.

The dimensions illustrated on this page are subject to change.



- West side of I-15 from Mission Valley to Mercy Road, transitioning to the east side of I-15 from Mercy Road to Escondido;
- Median of I-15 from Mission Valley to Escondido;
- Median of SR-163 from Mission Valley to SR-52, continuing to the west side of I-15 from SR-52 to Mercy Road, and then transitioning to the east side of I-15 from Mercy Road to Escondido; and
- Median of SR-163 from Mission Valley to SR-52, transitioning to the median of I-15 from SR-52 to Escondido.

In addition to the LRT study discussed above, the MTDB anticipates initiating a comprehensive high-speed bus alternative study and a comparative bus/rail analysis for the I-15 corridor in 1993.

### **Bicycle Facilities**

The Regional Transportation Plan identifies a community and regional bikeway system to serve this area. **Figure 10** shows the bikeway system in Kearny Mesa. The level of congestion on most streets in the community, however, does not encourage bicycle usage. Therefore, it is important to implement the network of existing bikeways to encourage bicycle commuting. Additionally, employer associations and local government, particularly the Engineering and Development and Caltrans Commuter Computer, should work together to present bicycle safety and commuting workshops at employment sites to show employees how to commute safely by bicycle to Kearny Mesa work sites. Employers should also provide secure bicycle parking facilities and shower and clothing lockers to accommodate bicycle commuters.

### **Pedestrian Facilities**

Most of the streets in the community are improved with sidewalks, and a few are used by pedestrians. Problems confronting pedestrians include automobile oriented, strip commercial developments, reduced sidewalk widths, the frequent placement of illegal A-frame signs on the sidewalks, the absence of a buffer between the pedestrians and the street, and traffic volumes which inhibit convenient street crossing.

### **Bus Service**

The existing bus service in Kearny Mesa is shown on **Figure 12**. A transfer point is located on Complex Drive, south of Clairemont Mesa Boulevard.





## **ISSUES**

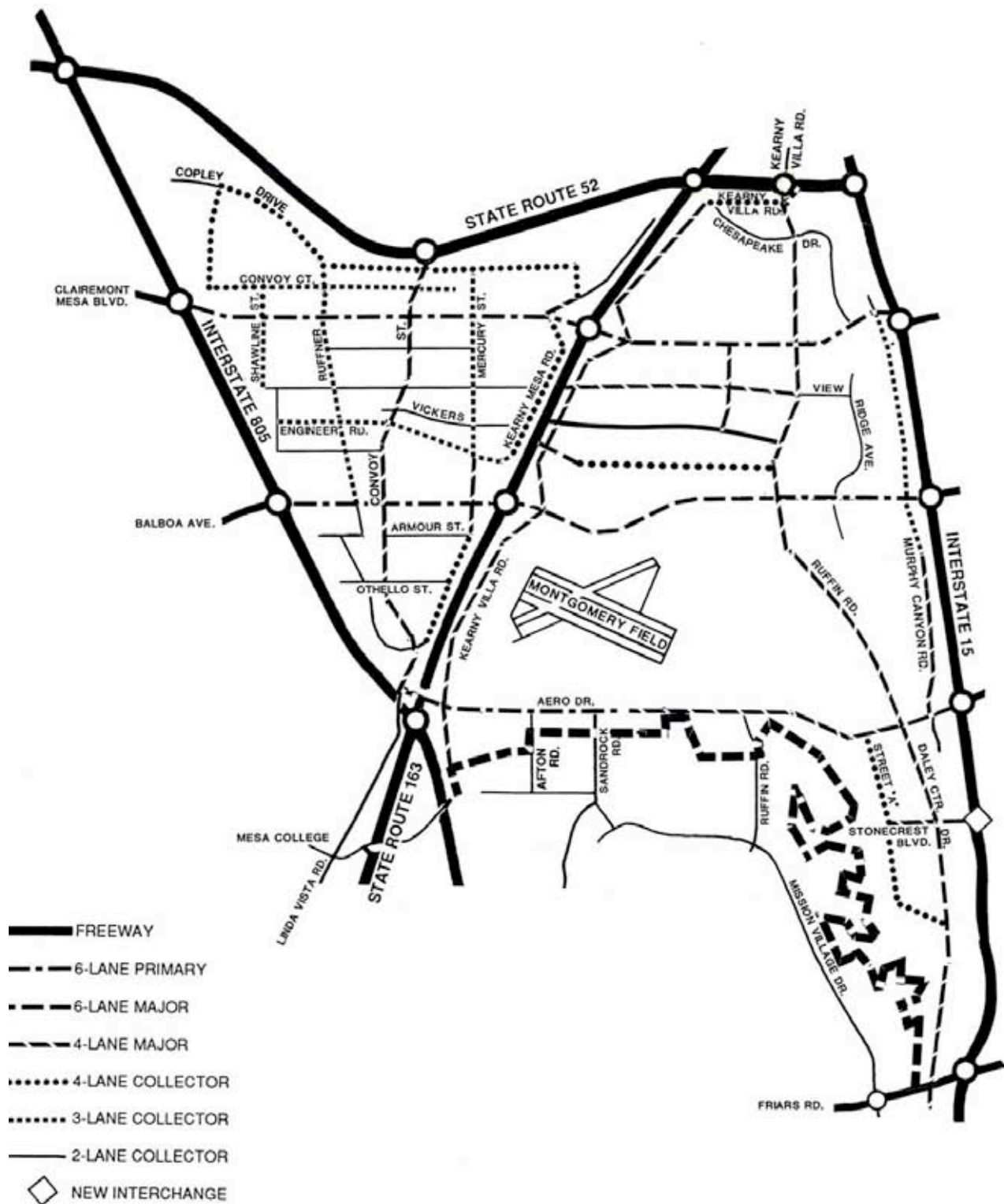
This Plan assumes that the private automobile will continue to be the preferred choice for employee transportation in Kearny Mesa. The capacity of the roadway network to accommodate vehicular trips is the prime constraint on development intensity. Vehicular trip generations will continue to be of paramount importance when reviewing development proposals in the future. In light of this, alternative modes of transportation that supplement the automobile are considered to be of particular importance in Kearny Mesa.

Ideally, forecasted traffic volumes on the surface street system will be reduced as additional mass transit services and facilities are provided and citywide and regional trip reduction programs become increasingly effective. This Plan acknowledges the desire for a balanced, multimodal transportation system to serve Kearny Mesa, and contains recommendations relating to public transit facilities, a potential shuttle “loop,” LRT, bikeways and street improvements. The future Kearny Mesa is envisioned to include access points to a LRT Line, with bus service and loop shuttles transporting riders from LRT stations and park-and-ride lots to activity centers within the community. Implicit in this conceptual scenario would be an urban form much different from what currently exists in Kearny Mesa -- transit corridors of intense development to buttress the area as a regional employment center. Feasibility studies and plans which identify infrastructure, services and funding sources will need to be developed with the full cooperation of the public sector and local businesses in order to implement this long-range vision. If these studies indicate that such an urban form is attainable, this Plan could be amended or updated to incorporate the findings of the studies.

## **POLICIES**

- Development intensities should correlate with the capacity of the circulation system.
- Street widenings, restriping and signalization improvements should be analyzed as needed to provide a safe and convenient transportation system for motorists, bicyclists and pedestrians.
- Transit passenger facilities should be provided commensurate with transit activity according to the transit facility guidelines in the MTDB’s Short Range Transit Plan.
- Once the MTDB has identified a preferred alignment, right-of-way dedications for public transit should be acquired as part of discretionary approvals. This should include dedications for LRT, a transit center and other bus facilities. Appropriate reservations should also be provided for the community bikeway system.
- Permit applicants should be strongly encouraged to incorporate provisions of the Transportation Demand Management (TDM) ordinance into their projects. In addition, developers, property owners, and employers in Kearny Mesa should establish a Kearny Mesa Traffic Management Association (TMA) as a means of achieving the goals of the TDM Ordinance.





## Recommended Roadway Facility Classifications

Kearny Mesa Community Plan

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FIGURE

- Public and private sector efforts should be made to identify funding sources for transit facilities and services such as the shuttle loop system.
- New or reconstructed primary arterials should be improved with medians of stamped concrete and/or landscaping where feasible.
- Bicycle parking facilities, including bicycle racks and lockers, should be provided as part of new development and redevelopment for bike commuters to store their vehicles. In addition, bicycle safety and commuting workshops for employees should be jointly sponsored by the City of San Diego, Caltrans Commuter Computer, and the proposed Kearny Mesa TMA.
- Enhanced facilities for pedestrian travel within the community should be provided to reduce auto-dependent travel.

## RECOMMENDATIONS

### Kearny Mesa Traffic Study

The City of San Diego's Engineering and Development Department prepared travel demand forecasts associated with alternative land uses proposed during the Kearny Mesa community planning process. In order to identify the land use intensities that would achieve both the highest level of development, and a circulation system that would function at acceptable levels, the Kearny Mesa Community Planning Group and the City's Planning staff requested that multiple land use scenarios be tested.

The travel demand forecast used for this Plan has been conducted to achieve a balance between the level of development intensity and the circulation needs of the community.

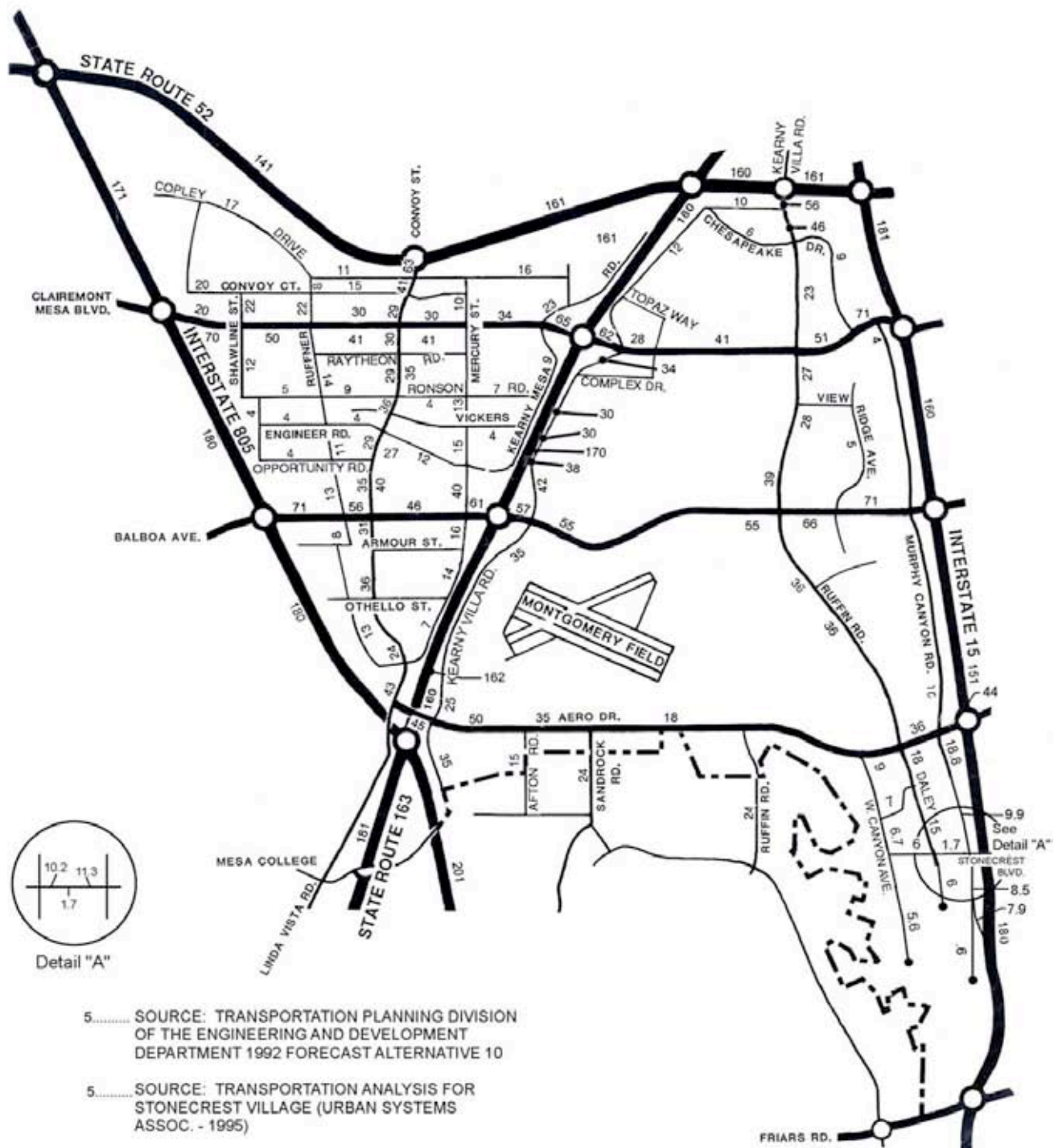
### Street System

The existing street system should be maintained with operational improvements made to increase efficiency and accommodate planned growth. The proposed street network and projected traffic volumes are illustrated in **Figures 13** and **14**. Recommended street improvements are listed on the following pages (**Table 3**).

### Parking

On-street parking should be removed from certain streets to increase the efficiency of traffic flow (see **Recommendations Section** of **Table 3**).

Landscaping in off-street parking areas should be provided in the form of mature trees, hedges and shrubs. Off-street parking area landscaping should consist of large canopied trees and parking area edges should be mounded and landscaped with shrubbery.



**Year 2005 Average Daily Trip Forecast (in thousands)**

**Kearny Mesa Community Plan**

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FIGURE

### **Goods Delivery**

Sufficient off-street areas for the loading and unloading of goods should be provided to eliminate obstructions in the public right-of-way. These loading areas and other service areas, including trash enclosures, should be screened from public view.

### **Public Transit**

Public transit should continue to be studied by the MTDB and SANDAG to provide adequate transit circulation within the community that also integrates with the regional system.

Private sector participation should be required for the construction and operation of the proposed Kearny Mesa transit center and for the operation of the proposed Kearny Mesa local shuttle loop system.

Developments should be coordinated with transit services and contribute to shuttle services to promote better access in the community, and should include the provision of accessible transit stops and other transit-related improvements as recommended by the MTDB.

An assessment district to generate funds necessary to support the construction and continued operation of public transit services and facilities in Kearny Mesa should be established.

### **Bus Service/High Occupancy Vehicles Corridor**

MTDB, property owners in Kearny Mesa, and the City of San Diego should work together to construct a transit center that would serve as a central focal point for existing local and regional bus services and possible future rail or high-speed bus system improvements. While the initial site location is in the vicinity of General Dynamics, the MTDB will undertake a more detailed site analysis as part of its I-15 corridor advance planning efforts. Private sector funding should be required to support the construction and continued operation of this facility.

A feasibility study should be conducted by the MTDB and the City of San Diego to develop a local Shuttle/Loop System. A shuttle loop service could greatly support non-auto commuting by providing a means for employees to get lunchtime trips (food, shopping, banking, etc.) done without being auto-dependent. The study should consider alternative financing methods including private sector financing for funding the ongoing costs.

Bus service should be developed and evaluated to take maximum advantage of the HOV lanes by providing increased regional service and local service. Such service should have peak hour buses operating on local streets and using the HOV lanes to provide express service directly to Kearny Mesa. In the off-peak hours, local buses and shuttles should feed into the Kearny Mesa transit center to provide timed transfers with regional express routes. Such a transit center is proposed by the MTDB at the junction of SR-163 and I-15 north of Kearny Mesa.

**TABLE 3**  
**RECOMMENDED STREET IMPROVEMENTS**

Street Segment	Between	Existing Configuration	Recommendations
Convoy Terrace	Ruffner Street to Convoy Street	2-lane collector	Widen to a 4-lane collector.
	Convoy Street to Magnatron Boulevard	Not constructed	Construct a 4-lane collector.
Convoy Court	Convoy Street to 800 feet east of Convoy Street	2-lane collector with a cul-de-sac prior to Mercury Street	Restripe to a 3-lane collector with a 2-way left turn lane.
Shawline Street	Clairemont Mesa Boulevard to Ronson Road	2-lane collector 50' curb-to-curb	Restripe to a 3-lane collector with 5-foot wide bike lanes. Eliminate parking. At Clairemont Mesa Boulevard, restripe to allow 2 lefts and 1 thru-lane for the northbound approach.
	Convoy Court to Clairemont Mesa Boulevard	4-lane undivided	Widen to a 4-lane collector with 5-foot wide bike lanes. At Clairemont Mesa Boulevard, widen to provide 1 left, 1 thru and 2 right-turn lanes for the southbound approach.
Ruffner Street	Balboa Avenue to Clairemont Mesa Boulevard	2-lane undivided with 50' curb-to-curb	Restripe to a 3-lane collector. Remove curb parking at intersections to allow 4 lanes.
	Clairemont Mesa Boulevard Convoy Court	2-lane collector with parking from Clairemont Mesa Boulevard to Convoy Court	Widen to a 4-lane collector with 56' of pavement between Clairemont Mesa Boulevard and Convoy Court. At Clairemont Mesa Boulevard, restripe to provide 1 left, 1 thru and 1 right-turn lane for the southbound approach.
	Convoy Street into the Collins/Allred property.	Not constructed	Construct as a 4-lane collector with 56' of pavement from Convoy Terrace, construct as a 4-lane collector with 58' of pavement beyond Convoy Terrace, into the Collins/Allred property, to the unnamed 2-lane north/south collector.
Convoy Street	At SR-52	2-lane collector bridge	Widen bridge to 78' in bridge width and provide 5' sidewalks.
	At Balboa Avenue		Provide 2 left, 3 thru and 1 right-turn lane for the north and southbound approaches.

Street Segment	Between	Existing Configuration	Recommendations
Mercury Street	Convoy Terrace to Engineer Road	2-lane undivided with parking in 50' curb-to-curb unconstructed north of Convoy Court	Restripe to a 3-lane collector between Clairemont Mesa Boulevard and Mercury Court, construct a 3-lane collector between Mercury Court and Convoy Terrace between Ronson Road and Engineer Road, remove parking and stripe for 5' bike lanes.
	Engineer Road to Kearny Mesa Road	4-lane major	Restripe to provide 5' bike lanes.
	At Balboa Avenue		Widen to provide 2 left, 1 thru, 1 thru/right, and 1 right-turn lane for the southbound approach.
Kearny Mesa Road	Convoy Street to Mercury Street	4-lane collector	Restripe to provide 5' bike lanes.
Magnatron Boulevard	Convoy Terrace to Kearny Mesa Road	2-lane collector	Widen to a 4-lane collector. Provide a continuous alignment between Magnatron and the 4-lane collector portion of Kearny Mesa Road, with the 3-lane collector portion of Kearny Mesa Road "T-ing" into Magnatron. Provide a continuous alignment between Convoy Terrace and Magnatron.
North Light Avenue	Aero Drive to StoneCrest southern limits	Not constructed.	Construct a 4-lane collector.
West Canyon Avenue	Aero Drive to StoneCrest southern limits	Not constructed.	Construct a 2- and 4-lane collector.
Daley Center Drive	Aero Drive to StoneCrest Boulevard	Not constructed.	Construct a 4-lane major with 5' bike lanes.
	StoneCrest Boulevard to StoneCrest southern limits	Not constructed.	Construct a 6-lane major with 5' bike lanes.
	StoneCrest southern limits to San Diego Mission Road	Not constructed.	Construct a four-lane major with bike lanes. No connection to Friars Road (grade separated).
Ruffin Road	Kearny Villa Road to Calle Fortunada	4-lane major	Remove parking and restripe to add 5' bike lanes.
	Calle Fortunada to Aero Drive	4-lane undivided with 64' of pavement	Remove parking and restripe to add 5' bike lanes and a continuous left-turn lane.
	At Balboa Avenue		Restripe to provide 2 left, 2 thru and 1 right-turn lane for the southbound approach.
	At Clairemont Mesa Boulevard		Widen to provide a northbound right-turn lane and a northbound thru-lane.



Street Segment	Between	Existing Configuration	Recommendations
Kearny Villa Road	SR-52 to Ruffin Road	4-lane collector	Widen to a 6-lane primary arterial with bike lanes.
	At Clairemont Mesa Boulevard		Widen to allow 2 left, 2 thru and 1 right-turn lane for the southbound approach, and 2 left, 2 thru and 1 right-turn lane for the northbound approach.
	At Aero Drive		Restripe to provide 2 left, 2 thru and 1 right-turn lane for the north and southbound approaches.
Murphy Canyon Road	Clairemont Mesa Boulevard to south of Balboa Avenue	2-lane undivided	Restripe to a 3-lane collector with 5' bike lanes. Remove parking.
StoneCrest Boulevard	North Light Avenue to Daley Center Drive	Unconstructed	Construct a 4-lane major with 5' bike lanes.
	Daley Center Drive to I-15	Unconstructed	Construct a 6-lane major.
Engineer Road	Cardin Street to Brinell Street and Mercury to Kearny Mesa Road	2-lane undivided with 50' curb-to-curb with parking	Restripe to a 3-lane collector, remove parking at intersections.
Clairemont Mesa Boulevard	I-805 to Kearny Mesa Road	6-lane major	Eliminate parking, consolidate and reduce driveway access and restripe to add 5' bike lanes.
	At Shawline Street		Widen to provide 2 left, 3 thru and 1 right-turn lane for the eastbound approach, and 1 left, 3 thru and 1 right-turn lane for the westbound approach.
	Kearny Mesa Road to Kearny Villa Road	4-lane divided with no parking	Widen bridge and approaches to 6 lanes with bike lanes, and improve pedestrian access.
	At Kearny Villa Road		Widen to provide 1 left and 3 thru lanes for the westbound approach, and 2 left, 3 thru, and 1 right-turn lane for the eastbound approach.
	Kearny Villa Road to Chesapeake Drive	5-lane divided with parking	Widen to a 6-lane primary arterial with 5' bike lanes.
	Chesapeake Drive to I-15 southbound ramps	5-lane divided with parking	Widen to a 6-lane primary arterial with no parking and restricted access and 5' bike lanes. Provide an eastbound free right-turn lane at Murphy Canyon Road.
	At Ruffin Road.		Widen to provide 2 left and 3 thru lanes for the westbound approach, and 2 left, 3 thru and 1 right-turn lane for the eastbound approach.

Street Segment	Between	Existing Configuration	Recommendations
<u>Caltrans Projects</u>			
Aero Drive	Sandarac Road to Kearny Villa Road	4-lane major with bike lanes in 84'	Widen to 6-lane primary arterial with no parking allowed. At Kearny Villa Road, widen to provide 2 left, 3 thru and 1 right-turn lane for the westbound, and restripe to provide 1 left and 3 thru lanes for the eastbound approach.
I-15	SR-163 to I-8	Variable, 6 to 8 lanes.	Widen to 8 lanes with auxiliary lanes, plus HOV or LRT lanes.
SR-52	I-805 to east of Santo Road	Variable, 6 to 8 lanes.	Widen to 8 lanes. Construct a 14' wide bike path parallel to SR-52.
Balboa Avenue (SR-274)	I-805 to Kearny Villa Road	6 lanes with a continuous left turn lane midblock and raised medians at intersections	Construct a raised median. Consolidate and restrict access. Continue to prohibit parking and install 5' bike lanes.
	At Convoy Street		Widen to provide 2 left, 3 thru and 1 right-turn lane for the westbound and eastbound approaches.
	At Ruffin Road		Widen to provide 2 left, 3 thru and 1 right-turn lane for the westbound approach, and 2 left, 3 thru and 2 right-turn lanes for the eastbound approach.
	Kearny Villa Road to west of Ruffin Road	4-lane major	Widen to a 6-lane primary arterial with 5' bike lanes.
I-15 Interchange	At Aero Drive	Variable	<p>A. Widen northbound on-ramp to 2 lanes plus ramp meter and CHP enforcement pad, plus minor traffic signal modifications.</p> <p>B. Restripe Aero Drive east of northbound off-ramp to provide standard lanes. No signal modification or widening.</p> <p>C. Widen southbound off-ramp to provide additional right-turn lane plus modify traffic signal.</p> <p>D. Widen Aero Drive to provide right turn lanes at southbound on-ramp.</p>
I-15	Murphy Canyon on-ramp and Friars Road off-ramp		Add auxiliary lane.

The TDM programs should be implemented by employers in Kearny Mesa in conjunction with the proposed citywide TDM program. In particular, measures that reduce peak hour trips, such as employer-subsidized transit passes, flexible and staggered work hours and carpool programs, should be implemented.

### **Light Rail Transit**

Expansion of the LRT service north from Mission Valley through Kearny Mesa should occur at the fastest rate possible consistent with available capital and operating funds in order to maximize regional transit ridership and optimize use of the LRT.

Development proposals along the I-15 LRT corridor should be subject to the following: Once the MTDB has identified a preferred LRT alignment, proposed development should be required to dedicate in fee title all necessary right-of-way for both the LRT and for any required stations, exclusive of parking lots, and contribute the equivalent cost of construction of an at-grade LRT facility and an at-grade LRT station, exclusive of LRT vehicles. Furthermore, proposed development should be conditioned upon agreement to not oppose the formation of any special assessment district formed for the purpose of providing funds for the construction of an LRT system.

### **Bicycle Facilities**

As part of the development review process, a community bikeway system should be developed as shown on **Figure 12**. Bikeways should be designed to meet the minimum standards included in the Caltrans Highway Design Manual and City of San Diego Council Policy 600-4.

New developments should provide secure bicycle parking at activity centers and commercial areas, including covered bicycle parking facilities such as covered lockers.

The addition of bicycle lanes, bicycle route signs and destination plates, bicycle parking facilities at employment sites and the inclusion of bicycle commuting encouragement programs in a future TSM program within the Kearny Mesa community is recommended to encourage bicycle commuting in place of the single-occupant motor vehicle.

### **Pedestrian Facilities**

Provide an enhanced pedestrian circulation system that provides a pleasant, walkable environment to connect activity centers and commercial areas. A pedestrian circulation system should be an important component in the design and siting of the Kearny Mesa Transit Center. Wheel chair ramps should be installed where appropriate in the community to improve access to the activity centers.

Development projects should provide internal pedestrian circulation, which connects with adjacent projects and the community-wide pedestrian system.

Curb cuts should not be permitted along designated primary arterials and should be minimized along all major streets. Project entries should be consolidated where feasible and joint entries utilized at property lines along arterials and four-lane collectors. Reductions in the number of curb cuts increase and improve pedestrian access, bicyclist access and street efficiency.

### **Traffic and Air Quality Mitigation**

New development should be required to provide its fair share of the mitigation measures suggested in this Plan to minimize additional negative traffic and air quality impacts within the community.

### **Intersections**

The following table represents a summary of an analysis of ten intersections that was conducted to forecast where localized traffic congestion would occur assuming Plan buildout land use conditions. In an employment community such as Kearny Mesa, two heavy peak hour traffic flows can be expected. To ensure that the worst-case levels of traffic were observed, the analysis was made during the afternoon rush hour. Congestion has been measured consistent with a methodology discussed in the Highway Capacity Manual Special Report 209, published by the Transportation Research Board. The Highway Capacity Manual includes a description of six levels of service (LOS) that define congestion on roads. In short, a level of service of "A" describes unrestricted vehicular movement whereas level of service "F" describes highly restricted movement. Another measure of congestion that transportation planners use is the volume to capacity ratio. A ratio of 0.6 or less would be similar to a LOS of "A" while a ratio greater than 1 would correspond to LOS "F". The minimum acceptable level of service for the Engineering and Development Department is LOS D.

Where congestion occurs in Kearny Mesa, additional cost-effective operational improvements have been recommended which could result in desirable levels of service (LOS C) at these intersections. Because seven of the ten intersections studied are currently operating at LOS C or D, the ability to maintain or improve the level of service of these intersections for buildout land use conditions is limited.

**TABLE 4**  
**SUMMARY OF KEARNY MESA INTERSECTION ANALYSIS**  
**(Volume/Capacity Ratio and Level of Service\*)**

<b>Intersection</b>	<b>Existing Conditions<sup>(1)</sup></b>	<b>Future Conditions with Recommended Improvements<sup>(2)</sup></b>	<b>Future Conditions with Recommended Improvements and TDM<sup>(3)</sup></b>
Aero Drive @ Kearny Villa Road	0.81 D	0.88 D	0.85 D
Balboa Avenue @ Convoy Street	0.90 D	0.86 D	0.82 D
Balboa Avenue @ Mercury Street	0.65 B	0.80 C	0.76 C
Balboa Avenue @ Ruffin Road	0.71 C	0.86 D	0.82 D
Clairemont Mesa Boulevard @ Convoy Street	0.73 C	0.80 C	0.76 C
Clairemont Mesa Boulevard @ Kearny Villa Road	0.72 C	0.89 D	0.85 D
Clairemont Mesa Boulevard @ Mercury Street	0.73 C	0.74 C	0.71 C
Clairemont Mesa Boulevard @ Ruffin Road	0.70 B	0.78 C	0.74 C
Clairemont Mesa Boulevard @ Ruffner Street	0.70 B	0.83 D	0.79 C
Clairemont Mesa Boulevard @ Shawline Street	0.87 D	0.83 D	0.79 C

Notes: \* Volume/Capacity ratio was calculated using the Intersection Capacity Utilization (ICU) method.

(1) Existing conditions are 1989 traffic volumes.

(2) Future conditions are 2005 traffic volumes with recommended roadway improvements.

(3) 2006 traffic volumes with recommended roadway improvements and a five percent reduction in peak hour volumes assumed due to the implementation of Transportation management (TDM) incentives.